

## REMARKS

Favorable reconsideration of this application is respectfully requested in view of the following remarks.

The title has been amended to address the issue set forth on page two of the Official Action.

Claims 2 and 9 have been amended to address the issue raised at the bottom of page two and the top of page three of the Official Action. Accordingly, withdrawal of the claim rejection based on the second paragraph of 35 U.S.C. § 112 is respectfully requested.

The claims currently pending in this application are Claims 1-20, with Claims 1, 6 and 20 being the only independent claims. Independent Claim 1 is directed to a fuel cell arrangement, independent Claim 6 recites a module for a fuel cell arrangement, and independent Claim 20 defines a process for producing a module for a fuel cell arrangement.

Each of the independent claims in this application has been rejected based on the disclosure in Japanese Application Publication No. 2001-338673 and International Application Publication No. WO 02/059995. Those rejections are respectfully traversed for at least the following reasons.

Independent Claims 1 and 6 have been amended to set forth features of the fuel cell arrangement and module that better distinguish over the disclosures in the cited references. In particular, independent Claims 1 and 6 have been amended to recite that the fuel cell arrangement and the module for a fuel cell arrangement includes a first electrode (i.e., at least one electrode), wherein such electrode is composed of two plates which directly contact one another. In addition, those claims

have been amended to recite that each of the two plates is provided with an opening, with the seal element extending through the opening in each of the plates.

By way of example, the present application describes, for example in paragraph [0027], that the electrodes 3 (sometimes referred to more commonly by others as a separator or separator plate) are each composed of two plates 7, 8 adjoining one another at their surfaces and held together by the seal element 9 of polymer material to form a module 10. The application also describes openings (e.g., indicated by reference numeral 12) in the plates through which extends the seal element seal element. These aspects of the fuel cell arrangement/module are also illustrated in various drawing figures. Though not recited in the claims, the application further describes other aspects of the disclosed arrangement such as the catalyst plate(s) 4, 6 (sometimes referred to more commonly by others an electrode) and the membrane(s) 5.

Because the electrode forming a part of the fuel cell arrangement/module is comprised of two plates, it is possible to form a desired surface topography on one side of the electrode and/or a desired surface topography on the other side of the electrode in a relatively easy manner through stamping or embossing the respective plate. This same possibility does not exist in the case of an electrode consisting of a single plate because the embossed structure on one surface produces a negative or opposite of the embossed structure on the backside of the plate. Thus, in the case of an electrode consisting of a single plate, any desired surface topography has to be provided by milling or the like.

In addition, original Claims 1 and 6 recite that the two plates are joined to one another by a common seal element of polymer material. Using such a seal element

to connect the plates is less expensive than welding, and provides a relatively leak-proofed interior of the electrode, which can be filled with a coolant.

*JP '673* does not disclose an electrode comprised of two plates connected by a sealing element as recited in Claims 1 and 6. Rather, this document discloses several electrodes connected by a sealing element, but the individual electrodes are not composed of two plates. Looking at, for example, Fig. 1 of *JP '673*, two separators 1, 2 and several layers between the separators are connected. However, each of the separators is one piece and is thus not composed of two plates as claimed.

Claims 1 and 6 are also distinguishable over the disclosure in *WO '995* at least by virtue of the recitation that the two plates forming the electrode are in direct contact with one another. This is clearly not the case in *WO '995*. Indeed, as can be seen from various drawing figures such as Figs. 1 and 2 in *WO '995*, and as mentioned in lines 6-13 of page 11 of *WO '995*, the plates in question are specifically intended to be separated from each other by a block 32, 34.

It is thus respectfully submitted that Claims 1 and 6, as well as the dependent claims, are allowable over *JP '673* and *WO '995*.

With respect to European Application Publication No. 0 951 086, this document fails to disclose two plates in direct contact with one another and forming an electrode, wherein each of the plates is provided with an opening through which extends the seal element that joins the two plates to one another as recited in independent Claims 1 and 6. It is noted in this regard that the recitation of the opening in each plate through which extends material of the sealing element was set forth in original Claims 5 and 12 which were not rejected based on the disclosure in

*EP '086.*

The process recited in independent Claim 20 has also been amended to set forth, in method terminology, aspects of the module not disclosed in the cited reference. Claim 20 thus recites that the process for producing a module for a fuel cell arrangement comprises inserting at least portions of two plates into a casting mold, with each of the two plates being provided with an opening, and filling the casting mold with a polymer seal material so that the seal material adjoins the two plates and extends through the opening in each of the two plates to form a module for a fuel cell in which the two plates directly contact one another and together form a single electrode of the module for the fuel cell arrangement.

As discussed above, *JP '673* does not disclose an electrode comprised of two plates connected by a sealing element, *WO '995* does not disclose that two plates forming the electrode are in direct contact with one another, and *EP '086* does not disclose that each of two plates forming an electrode is provided with an opening through which extends the seal element that joins the two plates to one another.

It is thus respectfully submitted that the method recited in Claim 20 is also allowable.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference with the undersigned would be helpful


in resolving any remaining issues pertaining to this application the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

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